Remarks

Claims 1, 3-8, 10-16, 18-20, 22-26, and 67-72 are pending. With this Amendment After Final Office Action, the Applicant is canceling claim 27 without prejudice. The Applicant previously canceled or authorized cancellation of claims 2, 9, 17, 21, 28-66 and 73 without prejudice.

The final Office action, dated April 21, 2005 ["final Office action"], rejects claims 1, 3, 5, 7, 15, 16, 20, 22, 25-27, 68, and 72 under 35 U.S.C 112, ¶2 for being indefinite. Claims 1, 3-8, 10-16, 18-20, and 22-27 are rejected under 30 U.S.C. 103(a) as being unpatentable over Hunt -- "Coign: Efficient Instrumentation for Inter-Component Communication Analysis" ["Hunt"] in view of U.S. Patent No. 5,893,118 to Sonderegger ["Sonderegger"]. The final Office action rejects claims 67, 69, and 71 as being unpatentable over Hunt in view of Sonderegger and "Official Notice." The final Office action rejects claims 68, 70, and 72 as being unpatentable over Hunt in view of U.S. Patent No. 6,016,392 to Jordan ["Jordan"]. The Applicant respectfully disagrees with the rejections of the claims.

I.   Initialed Form 1449's

The Applicant again thanks the Examiner for providing initialed Form 1449's for various Information Disclosure Statements filed in the application. In the final Office action, the Examiner writes, "IDS form 1449 between dates 1/10/2000 and 4/4/2001, do not exist in the application for consideration." [Final Office action, page 3.] The Applicant provides herewith copies of the following Information Disclosure Statements, Form 1449s, and postcards showing timely receipt by the US PTO.

(1)   Page 1 (of 1) of the Form 1449 for the IDS filed January 10, 2000, (received by the USPTO on January 18, 2000), which lists, among other things, two non-patent references by Aral et al.

(2)   Page 1 (of 1) of the Form 1449 for the IDS filed January 19, 2000 (received by the USPTO on February 7, 2000), which lists, among other things, a non-patent reference by Keppel, and a non-patent reference by Larus et al.

(3)   Pages 1-3 (of 3) of the Form 1449 for the IDS filed March 9, 2001 (received by the USPTO on March 13, 2001), which lists, among other things, U.S. Patent No. 5,193,180 by Hastings.

(4)   Page 1 (of 1) of the Form 1449 for the IDS filed April 4, 2001 (received by the USPTO on April 9, 2001), which lists, as its only item, a non-patent reference by Zielinski et al.

(5)   Page 1 (of 1) of the form 1449 for the IDS filed June 26, 2003 (received by the USPTO on July 7, 2003), which lists one non-patent reference by Pietrek.

The Applicant will provide additional copies of non-patent references cited in the foregoing Information Disclosure Statements if needed.

II.   With the goal of reaching a shared understanding of the disclosure of Sonderegger, the Applicant respectfully makes the following observations.

Sonderegger describes extending a loadClass() method to look for Java classes within a directory services database. [Sonderegger, Abstract, Figure 2.] When a Java component is needed on a local computer, a hash table is checked to see if the component is already loaded. [Sondregger, 7:36-48.] If the component is not loaded, then a database manager is queried. [Sondregger, col. 7:62-8:3, 9:55-57.]

The byte codes for a component are codes "capable of being interpreted and executed by a virtual machine in a Java interpreter." [Sonderegger, 7:5-10.] The database manager determines the location of the desired component's byte codes. [Sonderegger, 7:40-50; 9:17-59.] The byte codes for a component may be in a stream. In this case, the byte codes for more than one class can be included within a single stream if the stream is aggregated, or "wrapped," in a format such as .zip format. [Sonderegger, 8:50-55.]

III.   35 U.S.C. § 112, ¶ 2 Claim Language Indefiniteness Rejections

The Examiner rejects claims 1, 3, 5, 7, 15, 16, 20, 22, 25-27, 68, and 72 as failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The Applicant respectfully disagrees with these rejections and requests that the rejections be withdrawn.

Claim 1, 7, and 68

Each of claims 1, 7, and 68 recites the terms "interface" and "interface wrapping." These terms

indicate different concepts with different names, and both terms are used with clear antecedent basis. As used in claims 1, 7, and 68, "the interface" refers back to the term introduced as "an interface," and "interface wrapping" is something tracked by a data structure.

The Applicant respectfully requests these rejections be removed.

Claims 3 and 5

Each of claims 3 and 5 recites the terms "the interface" and "the reference." These terms have clear antecedent basis. As used in claims 3 and 5, "the interface" refers back to the term introduced as "an interface" in claim 1. As used in claims 3 and 5, "the reference" refers back to the term introduced as "a reference" in claim 1, where "a reference" is returned whether the interface is wrapped or not wrapped.

Claim 15

Claim 15 recites the language "the plural units" and "the unit to be activated" (not just "the unit" as the Examiner suggests). As used in claim 15, "the plural units" refers back to the term introduced as "plural units" in claim 1, and "the unit to be activated" refers back to the term introduced as "a unit to be activated" in claim 15.

Claim 16

The Applicant notes that the terms "the plural units" and the "the unit" do not appear in claim 16. Claim 16 does recite the language "the component that exposes the interface" (not just "the component" as the Examiner suggests). As used in claim 16, "the component that exposes the interface" refers back to the term introduced with "one of the plural components exposes the interface" in claim 16.

Claim 20

Claim 20 recites the language "the reference to the interface" and "the reference to the instrumentation" (not just "the reference" as the Examiner suggests). As used in claim 20, "the reference to the interface" refers back to the term introduced as "a reference to an interface" in claim 20, and the term "the reference to the instrumentation" refers back to the term introduced as "a

reference to instrumentation" in claim 20.

Claim 20 also recites the language "the component that exposes the interface" (not just "the component" as the Examiner suggests). As used in claim 20, "the component that exposes the interface" refers back to the term introduced with "one of plural components of software exposes the interface" in claim 20.

Claims 22 and 72

Claim 22 recites the language "the reference to the existing interface wrapper" (not just "the reference" as the Examiner suggests). As used in claim 22, "the reference to the existing interface wrapper" refers back to the term introduced as "a reference to an existing interface wrapper" in claim 20.

Claim 72 recites the language "the reference to the interface" (not just "the reference" as the Examiner suggests). As used in claim 72, "the reference to the interface" refers back to the term introduced as "a reference to an interface" in claim 20.

Claims 25-27

Claims 25 and 26 recite the language "the component that exposes the interface" (not just "the component" as the Examiner suggests). As used in claims 25 and 26, "the component that exposes the interface" refers back to the term introduced with "one of plural components of software exposes the interface" in claim 20.

The Applicant has canceled claim 27.

IV.   Hunt and Sonderegger, taken separately or in combination, fail to teach or suggest at least one limitation of each of claims 1, 3-8, 10-16, 18-20, and 22-26.

Claim 1 recites, in part:

> *determining if the interface has been wrapped* by checking a data structure that tracks interface wrapping for the plural units of the software program;
> *if the interface has been wrapped,* returning a reference to an existing entry for the

interface from the data structure, (emphasis added)

Claim 16 recites, in part:

> *determining if the interface is wrapped* by checking a data structure that tracks interface
> wrapping for plural components of software, wherein one of the components exposes the
> interface; (emphasis added)

Claim 20 recites, in part:

> *determining if the interface is wrapped* using a hash table;
> *if the interface is wrapped*, providing to a client component a reference to an existing
> interface wrapper, (emphasis added)

The Applicant respectfully submits that the art cited by the Examiner, taken separately or in
combination, fails to teach or suggest the above-cited language of claims 1, 16, and 20, respectively.

Neither Hunt nor Sonderegger teaches or suggests the above-cited language of claims 1, 16,
and 20, respectively. In the final Office action, the Examiner notes that Hunt "does not specifically
mention about whether the interface is wrapped or not, tracking interface wrapping and the entry being
new entry." [Final Office action, page 6.] The Applicant understands the Examiner to agree that Hunt
does not teach or suggest the above-cited language of claims 1, 16, and 20, respectively. Sonderegger
also does not teach or suggest the above-cited language of claims 1, 16, and 20, respectively.

Sonderegger describes locating and then loading byte codes for a Java component onto a local
computer. [See section II for cites.] Sonderegger uses the term "wrapped" a single time, and this use
of the term "wrapped" relates to aggregating byte codes for multiple Java components into a single
stream using, for example, a .zip format. [Sonderegger, 8:50-55.] This involves a grouping/
compressing operation, not wrapping an interface as recited in claims 1, 16, and 20, respectively.

Moreover, to the extent anything is "wrapped" in Sonderegger, it is the byte codes for an entire
component, not any interface. [*See* Sonderegger, Fig. 3, 8:50-55.]

Finally, in Sonderegger, a program, when it wants to use a component, looks up in a hash table whether the component is loaded and, if it is not loaded, queries a database manager for a location of byte codes for the component. [Sonderegger, 9:5-16, 9:55-57, 10:8-14.] This involves operations for an entire software component [Sonderegger, Fig. 3], which leads away from the "interface" operations of claims 1, 16, and 20, respectively.

In view of the foregoing remarks about claims 1, 16, and 20, the merits of the separate patentability of dependent claims 3-8, 10-15, 18-19, and 22-26 are not belabored at this point. Claims 1, 3-8, 10-16, 18-20, and 22-26 should be allowable. Such action is respectfully requested at this time.

V.   35 U.S.C. 103 Rejections of Claims 67, 69, and 71

The Applicant respectfully disagrees with the "Official Notice" remarks from the Examiner in the final Office action.

In any case, Hunt, Sonderegger, and the "Official Notice" remarks, taken separately or in combination, fail to teach or suggest at least one limitation of each of claims 67, 69, and 71. Claim 67 depends from claim 1 and includes all of the language of claim 1. Claim 69 depends from claim 16 and includes all of the language of claim 16. Claim 71 depends from claim 20 and includes all of the language of claim 20. As noted in section IV, Hunt and Sonderegger, taken separately or in combination, fail to teach or suggest the above–cited claim language of claims 1, 16, and 20, respectively. The "Official Notice" remarks in the final Office action also fail to teach or suggest the above-cited language of claims 1, 16, and 20, respectively.

Claims 67, 69, and 71 should be allowable.

VI.   35 U.S.C. 103 Rejections of Claims 68, 70, and 72

Hunt, Sonderegger, and Jordan, taken separately or in combination, fail to teach or suggest at least one limitation of each of claims 68, 70, and 72. Claim 68 depends from claim 1 and includes all of the language of claim 1. Claim 70 depends from claim 16 and includes all of the language of claim 16. Claim 72 depends from claim 20 and includes all of the language of claim 20. As noted in section IV, Hunt and Sonderegger taken separately or in combination, fail to teach or suggest the above–cited

claim language of claims 1, 16, and 20, respectively. The Jordan reference, describing a method for object-oriented programming to use dynamic interfaces, also fails to teach or suggest the above-cited language of claims 1, 16, and 20, respectively.

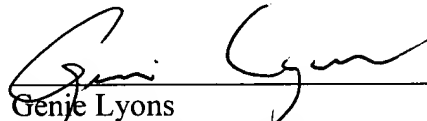Claims 68, 70, and 72 should be allowable.

Conclusion

Claims 1, 3-8, 10-16, 18-20, 22-26, and 67-72 should be allowable. Such action is respectfully requested.

Respectfully submitted,

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